



MANSCEN

Command Sergeant Major Safety Action Council (CSMSAC)

21 June 2006



CSMSAC Agenda

- **Introduction**
- **Hot Weather Injury Prevention**
- **90-Day Hazard Assessment**
- **Open Discussion**
- **Commanding General Closing Comments**

HEAT INJURY PREVENTION

- ◆ **MANSCEN's 2005 Experience**
- ◆ **Lessons Learned**



MANSCEN's 2005 Experience

- ◆ **Nine heat strokes**
- ◆ **Ages 18-31**
- ◆ **E1-O3**
- ◆ **Six different units (169th, 43d, 701st, 1-48, 82d, SLC)**
- ◆ **Six males, 3 females**
- ◆ **Five of the 9 occurred during Heat Cats 0 or 1**
- ◆ **Six occurred during the period 2300-0850**

MANSCEN's 2005 Experience

Temperature Trends

- ◆ **Very high temperatures:**
 - Days of 100° or 100°+ temperatures (5 of 9)
 - Days of 95° or higher temperatures (8 of 9)
- ◆ **Sustained high temperatures:**
 - Days when the temp was at least the third consecutive day of 90° or above (7 of 9)
- ◆ **Temperature spikes:**
 - Days when the temp was at least +7° compared to prior day (5 of 9)
- ◆ Days when the temp was at least 100° or increased at least 7° from the prior day (8 of 9)
- ◆ The first heat stroke, 24 June, occurred on the third day of

MANSCEN's 2005 Experience

◆ Five of the 9 occurred during Heat Cats 0 or 1

#1. Heat Cat 0:

- Not acclimated
- 3d day at 90° or 90°+

#2. Heat Cat 0:

- 2d day in unit
- Heat Cat 5 during both days

#3 and #4. Heat Cat 0:

- 5th day of FTX
- Heat Cat 5 all 5 days (105° on day of heat stroke)

#6. Heat Cat 1:

- 102° on day of heat stroke, 105° on prior day

MANSCEN's 2005 Experience

Activity Trends

- ◆ **8 of 9 during runs or road marches (8 of 9)**
- ◆ **Remaining 1 during an FTX** (day started with 8K foot march to FTX site)

- #1 - PT ability group run**
- #2 - 1/1/1 run**
- #3 - 15-km road march, fifth day of FTX**
- #4 - 15-km road march, fifth day of FTX**
- #5 - 12-mile road march**
- #6 - 10-km road march**
- #7 - FTX (8K foot march earlier in the day)**
- #8 - 3-mile run**
- #9 - 5-mile run**

Heat Injuries Lessons Learned

- ◆ **Balance Warrior Ethos and training requirements with health and safety.**
- ◆ **Be alert for Soldiers who are so well motivated that they may put themselves at risk of heat injuries by being reluctant to report heat injury symptoms.**
- ◆ **Cumulative Heat Stress is important! If Soldiers are subjected to successive days of heat stress, modify training to mitigate heat injury risk.**
- ◆ **Reverse cycle training as the standard day.**
- ◆ **Cancel training (both optional and required events) when necessary to protect Soldiers from heat.**

Lessons Learned

- ◆ **Be very cautious regarding conducting road marches and PT runs during hot weather.**
- ◆ **Ensure that Drill Sergeants actively check Soldiers for signs of heat injuries, during rest halts. Consider making these checks more than just verbal. Hands-on checks, to confirm perspiration and body temperatures are better.**
- ◆ **Consider bringing Soldiers in for cold showers, after each major event during the training day.**
- ◆ **Consider allowing cool field showers the night before a road march, in order to "cool down" Soldiers**
- ◆ **At the end of a training activity, or even during the activity, issue wash cloths soaked in cold water, to Soldiers, to use in cooling themselves. An alternative is disposable moist towelettes.**

Lessons Learned

- ◆ **Ensure that Soldiers are getting adequate sleep.**
- ◆ **Ensure that additional nutritional items are available on site during high heat periods, to supplement diets.**
- ◆ **Eat food more often (vegetables, fruits, salty snacks, electrolyte/carb/ protein beverages, electrolyte/carb/protein gels every 4 hrs or less).**
- ◆ **Ensure sufficient electrolyte intake (salty snacks, salty soups, electrolyte beverages, electrolyte gels).**
- ◆ **Empower leaders and battle buddies to monitor and enforce hydration and dietary compliance (eating a normal diet).**
- ◆ **Wear sunscreen lotion (SPF 50, sweat proof, with vitamins).**
- ◆ **Establish misting stations on running tracks.**

Lessons Learned

- ◆ **Rehearse casualty evacuation plan to ensure 100% communication (cell phone dead zones, radio interfaces).**
- ◆ **Ensure that Ice Sheets are available at all training sites. Plan on 8 sheets per company in large ice water cooler.**
- ◆ **Promptly use Ice Sheets for suspected heat injuries. Quick action to cool the Soldier's body may make the difference between a minor injury and a life-threatening condition.**
- ◆ **When iced sheets are used, they should be repeatedly re-iced and cooled during the victim cooling process. Cooling should be aggressive and should continue until the Soldier's mental status returns to normal.**



Lessons Learned

- ◆ **Any soldier with mental status changes (confused, unable to follow instructions, "not acting right", passed out) should be cooled immediately. Cooling should never be delayed to assess body temperature - begin treatment first (iced sheets), then assess their temperature.**
- ◆ **Cooling is the most critical intervention in the treatment of Heat Injuries. Do not try to transport a heat casualty victim yourself, except as a last resort**
- ◆ **As a general rule, heat casualties should not be transported to TMCs. Heat Casualties with mental status changes that required iced sheet treatment should be transported by competent medical authorities (call for EMS) while leaders/trainers focus on cooling and the ABCs while awaiting transport. Start initial treatment and call for the ambulance.**

Lessons Learned

- ◆ **Due to the unreliable nature of tympanic (ear) temperatures, evacuation decisions should never be based on tympanic temperatures.**
- ◆ **Realize that the initial signs of a lesser heat injury may cloud assessment of a worsening condition. Do not underestimate the possibility of a worsening condition.**
- ◆ **When outside the cantonment area, use the LMR radio to notify Range Control for evacuation. Use the red button priority option.**
- ◆ **When in Doubt, EVACUATE!** - Do not hesitate to immediately evacuate to the ER any Soldier who shows signs of a heat injury.

Evac ASAP
Cooling enroute

**Maintain 100%
constant
monitoring**

**Soak with
water and
fan**

**Replace
or refresh
sheets
when warm**

**Elevate
feet**

**Cover top
of head**

**Strip to
underwear**

**Cover with
iced sheets**



Iced Sheet Treatment

Stop cooling when casualty starts shivering or **rectal temp is 100 F. (Medic or EMT task)**

Basic load: 8 sheets/company in large cooler of ice water. 14

Water Intoxication (Hyponatremia)

- Frequently occurs in basic training units
- Caused by drinking too much **plain** water (over 12 qts/day)
- Characteristic symptoms:
 - Mental status changes
 - Vomiting
 - History of consumption of large volume of water
 - Poor food intake
 - Abdomen distended/bloated
 - Large amounts of clear urine
- Do not give more water or IV!

If awake, allow Soldier to consume salty foods/snacks

Rhabdomyolysis (Destruction of Muscle)

- TR 1-8 reportable illness (*as of 15 APR 05*)
- Common Causes:
 - Over exertion
 - Significant Heat Injury (complicated by poor hydration)
- Characteristics symptoms:
 - Muscle aches
 - Darkening of urine
 - Muscle weakness/pain
 - Electrolyte abnormalities
- Usually more severe if Sickie Trait positive
- Can lead to kidney failure and death

90 Day Hazard Assessment

Findings

- ▮ Accident rates spike in periods immediately following major operations.
- ▮ Army accidents on the rise.
- ▮ Summer accident experience normally higher.
- ▮ POV accidents continue to be the biggest killer of soldiers, civilians and family members.
- ▮ Motorcycle 18X risk.
- ▮ Ongoing operations in Iraq and Afghanistan dictate strict force protection measures.
- ▮ Redeployment and reintegration can increase exposure – Stressors.
- ▮ R&R exposure.
- ▮ Summer recreation activities increase exposure.

4th QTR Concerns

- ▮ Reintegration
- ▮ Deployment and Redeployment Activities
- ▮ POV & Motorcycle Operations
 - ✓ Loss of Proficiency
 - ✓ Indulgence
 - ✓ Increased traffic congestion.
 - ✓ Increased road construction.
- Training and Exercises
- High OPTEMPO
- ▮ Preventing On-Duty and Off-Duty Accidents
- ▮ Suicides
- ▮ Summer Safety

4th Qtr FY06 Risk Assessment

<u>Areas of Concern</u>		Initial Risk
Standards & Discipline	POV Operations / Motorcycles	
	Redeployment & Reintegration	
	Heat Injury Prevention	
	Training & Exercises	
	Holiday/Off Duty Activities	
	Suicides	

Ex
High

Ex
High

High

High

High

High



Low Risk



Moderate Risk



High Risk



Extremely High Risk

POV Operations

POTENTIAL RISKS

- ▢ Aggression
 - ✓ Speeding
 - ✓ Fatigue
 - ✓ Motorcycle Use
- ▢ Substance Abuse
 - ✓ Alcohol & Drugs While Driving
 - ✓ AWOL Machines
- ▢ Unsafe Vehicle Operation
 - ✓ Personal Vehicles Not Road Worthy
 - ✓ Driver Proficiency Degraded During Extended Deployment
 - ✓ Distracted Drivers (cell phones, eating)
 - ✓ Failure to use Seatbelts, Child Seats
 - ✓ Failure to Wear Motorcycle Helmets

CONTRIBUTING FACTORS

- ▢ Fatigue: Acute and Chronic
- ▢ Availability of Alcohol and Drugs
- ▢ Extended Driving Distances
- ▢ Increased Traffic Volume & Construction

CONTROLS

- ▢ Leader Engagement
- ▢ Sustain Aggressive Driving Prevention Programs
- ▢ Aggressive Media Campaign
- ▢ Use Risk Reduction Program (RRP) to Identify At-Risk Drivers and Intervene
- ▢ Train First-Line Leaders on Techniques to Reduce POV Accidents (6-Point POV Program)
 - ✓ Leaders/Commanders Safety Course
 - ✓ POV Toolbox
- ▢ Enforce Army Substance Abuse Program – Evaluation of All Substance Abusers IAW AR 600-85
- ▢ Conduct POV Orientation and Motorcycle Refresher
- ▢ Enforce POV-Focused Provisions of DOD Instruction 6055.4, AR 385-55
- ▢ Implement Vehicle Inspections Prior to Releasing Soldiers

Redeployment and Reintegration

POTENTIAL RISKS

- ▢ Insufficient Planning
- ▢ Operation of Motor Vehicles
- ▢ Absence, Rotation or New Leadership
- ▢ Rail, Convoy and Port Operations
- ▢ Soldier Acclimation
- ▢ Reunion & Reintegration Stressors
- ▢ Units Without Risk Management Staff Expertise
- ▢ Deployment / Redeployment Preparedness
- ▢ Emerging Theater Specific Threats & Risks
- ▢ Rear Detachment Support During Redeployment and Reintegration Activities

CONTRIBUTING FACTORS

- ▢ High OPTEMPO
- ▢ “Get-home-itis” or “Smelling the Barn”
- ▢ Lost POV Proficiency of Returning Soldiers
- ▢ Alcohol Tolerance of Redeploying Soldiers
- ▢ Fatigue: Acute and Chronic

CONTROLS

- ▢ Leader Engagement
- ▢ Briefings and Counseling Sessions for Soldiers
- ▢ Maintain Active Leader Presence at Rear HQ during Redeployment and Reintegration Process
- ▢ Collection and distribution of Lessons Learned (DA, CRC)

Training and Exercises

POTENTIAL RISKS

- ▢ Active, Unit Level and Individual Mobilization Augmentees
 - ✓ Differing SOPs & Unit Policies
 - ✓ Differing Safety Structure & Oversight
- ▢ Military Vehicle Operations – Night and Limited Visibility Operations
- ▢ Short Notice Rotational Schedule due to Wartime Commitments
- ▢ Acquisition of Off-the-Shelf and Conditional Material Release Equipment
- ▢ Training Rotations
 - ✓ Live Fire

CONTRIBUTING FACTORS

- ▢ OPTEMPO
- ▢ Fatigue and Stress
- ▢ Extended Driving Distances
- ▢ Increased Hours of Operation

CONTROLS

- ▢ Chain of Command Presence at Training
- ▢ Provide Adequate Planning Time
- ▢ Closely Manage Taskers and Schools to Assure Leader Presence During Training
- ▢ Use Crawl / Walk / Run Approach to Limited Visibility Training
- ▢ Conduct Task Force Mission Rehearsals and Mission / Safety Briefs Before Operations
- ▢ Review and Acceptance at Appropriate HQ for Off-The-Shelf and Conditional Materiel Release Equipment
- ▢ Rapidly Disseminate Conditional Materiel Release Equipment Lessons Learned
- ▢ Ensure Hot Weather Training - Implement Work/Rest Cycles

Holiday/Off Duty Activities

POTENTIAL RISKS

- ▢ Conduct activities which have no definable standards or controls.
- ▢ Human Factors
 - ✓ Overconfidence
 - ✓ Complacency to Off-Duty Hazards
 - ✓ At-Risk Behavior
- ▢ Celebrations Involving Alcohol
- ▢ Driving Long Distances
- ▢ Exposure to high risk activities
 - ✓ Water Sports

CONTRIBUTING FACTORS

- ▢ No Supervisory Oversight While Off Duty
- ▢ Fatigue and Stress
- ▢ Alcohol & Drugs
- ▢ Extended Driving Distances – Holiday Driving
- ▢ Cold and Inclement Weather

CONTROLS

- ▢ 1st Line Leader Engagement
- ▢ Pass Control: Early Departure / Late Arrival
- ▢ Aggressive Command Information Program
- ▢ Sustain Aggressive Driving Prevention Programs at All Levels:
 - ✓ Aggressive Media Campaign
- ▢ Use Risk Reduction Program (RRP) to Identify At-Risk Drivers and Intervene
- ▢ Enforce Army Substance Abuse Program – Evaluation of All Substance Abusers IAW AR 600-85
- ▢ Buddy System

Suicides

POTENTIAL RISKS

- ▮ Loss of
- ▮ Possible Threat to Family & Acquaintances
- ▮ Humanitarian Considerations
- ▮ Access to Weapons

CONTRIBUTING FACTORS

- ▮
- ▮ Marital / Relationship Discord
- ▮ Deployment Stress
- ▮ Combat Stress
- ▮ Financial Pressures / Obligations
- ▮ Substance Abuse

CONTROLS

- ▮ Leader Involvement
- ▮ Effective command communication and suppression of mis-information.
- ▮ Ensure Unit Suicide Prevention Programs Are Completed
- ▮ Review Guidelines in Suicide Prevention Policy
- ▮ Train 1st Line Leaders to Identify and Assist At-Risk Soldiers
- ▮ Wellness Programs
- ▮ Chaplain's Programs
- ▮ Mental Health Involvement
- ▮ Weapons and Ammunition Control Procedures
- ▮ Effective Implementation of the Risk Reduction Program (RRP)

OPEN DISCUSSION

CSM Cheney's Closing Remarks